

ABSTRACT

With respect to a vacuum tube having a reduced pressure vessel containing an electric discharge gas sealed therein, problems such as the lowering of discharge efficiency owing to an organic material, moisture or oxygen remaining in the reduced pressure vessel have taken place conventionally. It has been now found that the selection of the number of water molecules, the number of molecules of an organic gas and the number of oxygen molecules remaining in the reduced pressure vessel, in a relation with the number of molecules of a gas contributing the electric discharge allows the reduction of the adverse effect by the above-mentioned remaining gas. Specifically, the selection of the number of molecules of the above electric discharge gas being about ten times that of the above-mentioned remaining gas or more can reduce the adverse effect by the above-mentioned remaining gas.